

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method of generating multiple independent images from a single display screen, said method comprising:

illuminating said display screen with a plurality of sources to create a plurality of display sub-images; and

focusing said display sub-images with a converging display lens, wherein each said display sub-image is redirected along one of a plurality of sub-paths from a point proximate to the focal point of said display sub-images.

2. (Original) The method of claim 1 wherein each source illuminates said display screen from a different direction.

3. (Original) The method of claim 2 wherein said sub-path of each said display sub-image is associated with said direction of said source creating said display sub-image.

4. (Withdrawn) The method of claim 1 wherein a first source illuminates said display screen with light having a first polarization, and wherein a second source illuminates said display screen with light having a second polarization.

5. (Withdrawn) The method of claim 4 wherein said sub-path of said display sub-image is associated with said polarization of said source creating said display sub-image.

6. (Original) The method of claim 1 further comprising:
forming a real image along at least one said sub-path.

7. (Previously Presented) The method of claim 1 wherein each said sub-image is adjusted for viewing by an eye of a user by optics along its respective sub-path.

8. (Previously Presented) A method of transmitting different images to each eye of a user using a single display screen, said method comprising:

creating a plurality of sub-images of said single display screen wherein said sub-images are focused by a converging lens proximate to said display screen; and

redirecting each said sub-image to one of a plurality of oppositely-oriented sub-paths from a point proximate to the focal point of said sub-images.

9. (Original) The method of claim 8 wherein creating said plurality of sub-images comprises:

displaying on said display screen a plurality of interlaced data streams, wherein each said data stream is linked with a direction of light illuminating said display screen.

10. (Original) The method of claim 9 wherein a first data stream is linked with a first source illuminating said display screen from a first direction and a second data stream is linked with a second source illuminating said display screen from a second direction, and wherein said display screen is illuminated by said first source when said first data stream is displayed and illuminated by said second source when said second data stream is displayed.

11. (Original) The method of claim 8 wherein said redirecting comprises:
focusing each said sub-image to a focal point of said lens; and
arranging a splitter proximate to said lens focal point.

12. (Original) The method of claim 8 wherein each said sub-path is intended for viewing by a specific eye of a user.

13. (Original) The method of claim 12 wherein said data streams generate a three-dimensional image when viewed by the eyes of said user.

14. (Previously Presented) A head mounted display for generating images comprising:

means for illuminating a display screen from a plurality of directions, wherein a plurality of display sub-images of a display screen are created;

means of convergingly focusing said sub-images; and

means proximate to the focal points of said sub-images for redirecting each said sub-image along one of a plurality of oppositely-oriented sub-paths.

15. (Original) The head mounted display of claim 14 further comprising:
source light incident upon said display screen from a first direction, said first light direction causing a sub-image to be focused to a first focal point; and

source light incident upon said display screen from a second direction, said second light direction causing a sub-image to be focused to a second focal point.

16. (Original) The head mounted display of claim 15 further comprising:
a means for blocking light interposed between said focusing means and said splitting means.

17. (Original) The head mounted display of claim 15 further comprising:
a first reflective surface positioned to redirect light focused to said first focal point along a first sub-path; and
a second reflective surface positioned to redirect light focused to said second focal point along a second sub-path.

18. (Original) The head mounted display of claim 15 wherein:
a plurality of data streams are alternately displayed on said display screen, and wherein each data stream is linked with either said first or said second light direction.

19. (Original) The head mounted display of claim 15 wherein said display screen is illuminated from said first light direction only when a first data stream is displayed, and said display screen is illuminated from said second light direction only when a second data stream is displayed.

20. (Previously Presented) A system for generating multiple images comprising:
a display screen illuminated by a plurality of light sources to generate a plurality of sub-images;
optics arranged proximate to said display screen positioned to convergently focus said sub-images; and
a plurality of redirectors arranged proximate to the focal point of at least one sub-image, said redirectors operable to redirect each said sub-image along one of a plurality of optical sub-paths.

21. (Original) The system of claim 20 wherein each source illuminates said display screen from a different direction.

22. (Previously Presented) The system of claim 20 further comprising:
an aperture stop interposed between said optics and said redirectors, wherein the light generating each said sub-image may be selectively prevented from striking said at least one reflector.

23. (Original) The system of claim 20 further comprising:

a plurality of data streams alternately displayed on said display screen, wherein each said data stream is linked with at least one light source, and wherein said display screen is illuminated by said light source linked with said data stream when said data stream is displayed.

24. (Original) The system of claim 20 wherein at least one light source reflector is arranged about a display axis, wherein said light source reflector reflects at least a portion of the light from said plurality of light sources onto said display screen and transmits at least a portion of the light reflected by said display screen.

25. (Withdrawn) The system of claim 24 wherein said light source reflector is a polarizing beam splitter.

26. (Original) The system of claim 20 where in the plurality of light sources are arranged about a display axis and the plurality of redirectors are partially-reflective surfaces interposed between said display screen and said light sources.

27. – 52. (Canceled)

53. (Currently Amended) A system for generating multiple images, said system comprising:

a display screen illuminated by at least one light source;
a lens that focuses light reflected from said display screen; and
a beam splitter placed proximate to the focal point of light from said at least one light source.

54. (Withdrawn) The system of claim 53 further comprising:

a plurality of light sources, wherein such said source illuminates said display screen with light of different polarization.

55. (Withdrawn) The system of claim 54 wherein said display screen displays a plurality of data streams, wherein each said data stream is linked with one of said light sources, and wherein said display screen is illuminated by each said source only when said data stream linked with said source is displayed.

56. (Original) The system of claim 53 wherein said splitter is an asymmetric V-mirror.

57. – 58. (Canceled)